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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/725,544	12/03/2003	Chun-Yung Huang	3624-0143P	3190
2292	7590	08/24/2004	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			BLAU, STEPHEN LUTHER	
			ART UNIT	PAPER NUMBER
			3711	

DATE MAILED: 08/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/725,544	Applicant(s) HUANG ET AL	
	Examiner Stephen L. Blau	Art Unit 3711	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 August 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) 3,8,9 and 11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-7,10 and 12 is/are rejected.
- 7) ☒ Claim(s) 1 and 10 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>12/3/03</u> . | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Election/Restrictions***

1. This application contains claims directed to the following patentably distinct species of the claimed invention:

Group 1 (Design)

- a. Species 1 (Fig. 4): Claim 2.
- b. Species 2 (Fig. 7): Claims 2 and 8.
- c. Species 3 (Fig. 9): Claims 2 and 9.
- d. Species 4 (Fig. 10): Claim 3

Group 2 (Type of Intermediate Layer)

- a. Species 1 (Tablet, powder, paste): Claim 10.
- b. Species 2 (Electroplating/spraying): Claim 11.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, claims 1, 4-7, and 12 are generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim

is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

2. During a telephone conversation with Mr. Joe Muncy on 18 August a provisional election was made with traverse to prosecute the invention of species 1 (Fig. 4) for Group 1 claims and species 1 for Group 2 claims, claims 1-2, 4-7, 10 and 12. Affirmation of this election must be made by applicant in replying to this Office action. Claims 3, 8-9 and 11 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

***Claim Objections***

3. Claims 1 and 10 are objected to because of the following informalities: The word "intermedia" seems to be misspelled. Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 4-7 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shira in view of Isobe.

Shira discloses a first portion (Ref. Nos. 2, 6) made of a first metal in the form of stainless steel (Col. 4, Lns. 7-10) including an abutting portion (Fig. 1), a second portion (Ref. No. 4) being made of a second metal in the form of titanium (Col. 3, Lns. 49-51) including an abutting portion (Fig. 1), an intermediate layer of a third metal in the form of silver, nickel and other metals (Col. 4, Lns. 64-67) material positioned between an abutting portion of a first portion and an abutting portion of a second portion in the form of a filler metals (Col. 4, Lns. 64-67), friction welding (Col. 4, Lns. 1-4), and an intermediate layer being powdery (Col. 5, Lns. 1-2). Shira does not disclose the

Art Unit: 3711

compatibility between the first, second and third metals that but clearly an artisan skilled in the art of placing two different metals together using friction welding and an filler metal would have selected a suitable filler metal in which a metallurgical compatibility between a first metal and a third metal being better than that between a first metal and a second metal, and a metallurgical compatibility between a second metal and a third metal being better than that between a first metal and a second metal are included.

Shira lacks an intermediate layer and the abutting portion of the first portion being joined together by welding friction, the intermediate layer and the abutting portion of the second portion being joined together by welding friction, a metallurgical compatibility between a first metal and a third metal being better than that between a first metal and a second metal, and a metallurgical compatibility between a second metal and a third metal being better than that between a first metal and a second metal.

Isobe discloses a process of friction welding titanium to an intermediate layer containing nickel and friction welding the intermediate layer containing nickel to steel (Abstract, Col. 4, Lns. 1-13). In view of the patent of Isobe it would have been obvious to modify the golf head of Shira to have an intermediate layer and the abutting portion of the first portion being joined together by welding friction, and the intermediate layer and the abutting portion of the second portion being joined together by welding friction in order to use a known method of friction welding a joint together using a filler material.

It would have obvious to modify the head of Shira to have a metallurgical compatibility between a first metal and a third metal being better than that between a first metal and a second metal, and a metallurgical compatibility between a second

Art Unit: 3711

metal and a third metal being better than that between a first metal and a second metal in order to have a joint stronger by using a filler metal.

6. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shira in view of Isobe as applied to claims 1, 4-7 and 10 above, and further in view of Takeda (5,769,307).

Shira lacks an abutting portion of a first portion being formed on an extension extending from a heel of a body and an abutting portion of the second portion being formed on a hosel.

Takeda discloses components of a golf head (Figs. 9-10) friction welded together (Col. 5, Lns. 50-62), and an abutting portion of a first portion of steel being formed on an extension extending from a heel of a body and an abutting portion of the second portion of titanium being formed on a hosel (Col. 4, Lns. 65 through Col. 5, Lns. 5). In view of the patent of Takeda it would have been obvious to modify the head of Shira to have an abutting portion of a first portion being formed on an extension extending from a heel of a body and an abutting portion of the second portion being formed on a hosel in order to utilize the method of welding of Shira with the body and hosel joint of Takeda.

7. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shira in view of Isobe as applied to claims 1, 4-7 and 10 above, and further in view of 2003-25075.

Art Unit: 3711

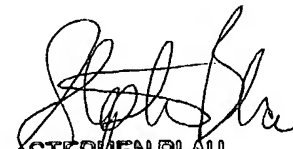
Shira lacks each of the abutting portions including a surface roughness smaller than Ra 25 um.

2003-25075 discloses surface roughness of metal components friction welded together have a surface of roughness being Ra 10 or less (English, Basic Abstract). 2003-25075 does not state the specific units but the metric system units are being used in the reference of 2003-25075 and one skilled in the art would use a suitable unit in which micro-meters is included. In view of the reference of 2003-25075 it would have been obvious to modify the head of Shira to have each of the abutting portions including a surface roughness smaller than Ra 25 um in order to utilize a known surface roughness used when friction welding is made on the surface.

### ***Conclusion***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steve Blau whose telephone number is (703) 308-2712. The examiner is available Monday through Friday from 8 a.m. to 4:30 p.m.. If the examiner is unavailable you can contact his supervisor Greg Vidovich whose telephone number is (703) 308-1513. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0858. (TC 3700 Official Fax 703-872-9306)

slb/ 19 August 2004

  
**STEPHEN BLAU**  
**PRIMARY EXAMINER**